16811

DATE: August 16 2002

TETRA TECH
200 E. RANDOLPH DRIVE
SUITE 4700
CHICAGO, IL 60601

Attn: ERIC MONCHEIN

SITE NAME: Sauget Site H & I

CASE NO	LAB	NO # OF SAMPLES	SDG	MATRIX
30721	AATS	2	ME21M0	Soil

==========

Upon receipt of data, please check each package for completeness and note any missing deliverables below.

Send this form back to Sylvia Griffin, Data Management Coordinator after filling in the blanks below.

Data Received by:_____ Date:_____

PROBLEMS:

Please indicate if data is complete, and note if there are any deliverables missing from the cases noted above.

_____

_____

Received by Data Management Coordinator, CRL for file.
Date:_____

Signature:_____

FROM: U.S. EPA
Region V
Central Regional Laboratory
536 S. Clark, 10th Floor
CHICAGO, IL 60605

Sent By: Eva M. Dixon, Sr. Data Specialist
ESAT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: August 13, 2002

SUBJECT: Review of Data
Received for Review on July 24, 2002

FROM: Stephen L. Ostrodka, Chief (SMF-4J)
Superfund Field Services Section

TO: Data User: Tetra Tech

We have reviewed the data for this case. We have also reviewed the CADRE generated validation files.

SITE NAME: Sauget Site H & I

CASE NUMBER: 30721 SDG NUMBER: ME21M0

Number and Type of Samples: 2 soils

Sample Numbers: ME21M0,1

Laboratory: AATS Hrs. for Review: 4 +1

Following are our findings:

CC: Cecilia Moore
Region 5 TPO
Mail Code: SM-5J

Case Number : 30721
Site Name: Sauget Site H & I

SDG Number: ME21M0
Laboratory: AATS

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

Two soil samples numbered ME21M0 and ME21M1 were collected on July 15, 2002. The lab received the samples on July 17, 2002. The sample cooler was 6.2 degrees C upon receipt. All samples were analyzed for metals. All samples were analyzed using CLP SOW ILM04.1 analysis procedures.

Mercury analysis was performed using a Cold Vapor AA Technique. The remaining inorganic analyses were performed using an Inductively Coupled Plasma-Atomic Emission Spectrometric procedure.

The reviewer corrected some results on form 1.

The mercury raw data shows that sample ME21M1 was reanalyzed, and the subsequent result was significantly different from the original. No reason was given as to why the sample was reanalyzed, and this reviewer could see no reason given the information provided. Had the original result been reported, the spike would have been out of control. The lab should be contacted and requested to provide an explanation; until this is provided, all mercury results will be qualified due to a possible low bias from the matrix spike.

Reviewed By: J. Ganz
Date: August 13, 2002

Case Number : 30721
Site Name: Sauget Site H & I

SDG Number: ME21M0
Laboratory: AATS

1. HOLDING TIME:

HOLDING TIME CRITERIA

Inorganic

	-- Holding Time --		------- pH -------	
	Primary	Expanded	Primary	Expanded
Metals	180	0	2.0	0.0
Mercury	28	0	2.0	0.0

DC-280: The following inorganic soil samples were reviewed for holding time violations using criteria developed for water samples.

ME21M0, ME21M1

No problems were found for this qualification.

2. CALIBRATIONS:

CALIBRATION CRITERIA

Inorganic

Percent Recovery Limits

	--- Primary ---		-- Expanded ---	
	Low	High	Low	High
ICP	90.00	110.00	75.00	125.00
Mercury	80.00	120.00	65.00	135.00

No problems were found for this qualification.

3. BLANKS:

LABORATORY BLANKS CRITERIA

The following samples are associated with a negative blank concentration whose absolute value is greater than the IDL. The sample concentration is greater than the IDL but less than 5 times the absolute value of the blank concentration. Hits are qualified

Reviewed By: J. Ganz
Date: August 13, 2002

"J". Some non-detect concentration values are sufficiently high that the detection limit may be elevated. These non-detects are qualified "UJ".

Mercury
ME21M1

4. MATRIX SPIKE/MATRIX SPIKE DUPLICATE AND LAB CONTROL SAMPLE:

MATRIX SPIKE CRITERIA

Inorganic

Percent Recovery Limits	
Upper	125.0
Lower	75.0
Extreme lower	30.0

DC-268: The following inorganic samples are associated with a matrix spike recovery which is low (30-74 %) indicating that sample results may be biased low.
Hits are qualified "J" and non-detects are qualified "UJ".

Selenium
ME21M0, ME21M1

DC-269: The following inorganic samples are associated with a matrix spike recovery which is extremely low (<30 %) indicating that sample results may be biased low.
Hits are qualified "J" and non-detects are qualified "R".

Nickel
ME21M0, ME21M1

Pending the resolution of the mercury sample reanalysis issue raised on page 2, the following results are qualified "J".

Mercury
ME21M0, ME21M1

DC-331: The following inorganic soil samples are associated with a solid laboratory control sample (LCS) higher than the EPA control limit indicating a potential positive bias in the sample results.
Hits are qualified "J", non-detects are acceptable.

Reviewed By: J. Ganz
Date: August 13, 2002

Sodium
ME21M0, ME21M1

5. LABORATORY AND FIELD DUPLICATE

DC-330: The following inorganic samples are associated with duplicate results which did not meet absolute difference criteria. Hits are qualified "J" and non-detects are qualified "UJ".

Nickel
ME21M0, ME21M1

6. ICP ANALYSIS

No problems were found for this qualification.

7. GFAA ANALYSIS

No GFAA analyses were performed for this case.

8. SAMPLE RESULTS

All data, except those qualified above, are acceptable.

Reviewed By: J. Ganz
Date: August 13, 2002

CADRE Data Qualifier Sheet

Qualifiers	Data Qualifier Definitions
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R	The data are unusable. (The compound may or may not be present)

Analytical Results (Qualified Data)

Case #: 30721 SDG : ME21M0
Site : SAUGET SITES H & I Number of Soil Samples : 2
Lab. : AATS Number of Water Samples : 0
Reviewer : J. GANZ
Date : AUGUST 13, 2002

Sample Number :	ME21M0		ME21M1							
Sampling Location :	H/WS-02-07		H/WS-02-08							
Matrix :	Soil		Soil							
Units :	mg/Kg		mg/Kg							
Date Sampled :	07/15/2002		07/15/2002							
Time Sampled :	15:32		15:32							
%Solids :	78.1		92.2							
Dilution Factor :	1.0		1.0							
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	4400		1810							
ANTIMONY	2.3	U	1.9	U						
ARSENIC	17.5		6.2							
BARIUM	3300		126							
BERYLLIUM	0.36		0.25							
CADMIUM	12.4		1.7							
CALCIUM	23200		8950							
CHROMIUM	99.0		7.3							
COBALT	35.9		12.4							
COPPER	287		60.2							
IRON	81800		4090							
LEAD	648		72.6							
MAGNESIUM	1570		941							
MANGANESE	574		67.6							
MERCURY	2.6	J	0.20	J						
NICKEL	2990	J	136	J						
POTASSIUM	513		371							
SELENIUM	1.2	J	0.83	J						
SILVER	1.7		0.21							
SODIUM	590	J	539	J						
THALLIUM	4.7		0.63	U						
VANADIUM	17.9		9.5							
ZINC	2430		704							
CYANIDE										

QC EXCEPTION SUMMARY REPORT

CASE\SAS#: 30721 SITE: Sanget Site H&I MATRIX: Soil WATER SAMPLE SPK: _____

DATA SET: ME21MD LAB: AATS CONC: low WATER SAMPLE DUP: _____

LAB QC # _____ REVIEWED BY: J. Ganz SOIL SAMPLE SPK: _____

DATE: August 9, 2002 SOIL SAMPLE DUP: _____

FORM #		FORM 2	FORM 2	FORM 3	FORM 3	FORM 3	FORM 4	FORM 5	FORM 6	FORM 7	FORM 7	FORM 9	FORM 9	FORM 6	FORM 5	FIELD	FIELD	FIELD	FIELD		
ELEMENT	HOLD TIME	INITIAL CALIB	CONTI N CALIB	CALIB BLANK	PREP WATER BLANK	PREP SOIL BLANK	ICB %R	SOIL SPIKE %R	SOIL DUP RPD	LCS AQ	LCS SOIL	SERIAL DILUTION AQUEOUS	SERIAL DILUTION SOIL	AQ DUP RPD	AQ SPIKE %R	BLANK	DUP RPD	BLANK	DUP RPD	GFAA DUP	GFAA ANALYT SPIKE
ALUMINUM																					
ANTIMONY																					
ARSENIC																					
BARIUM																					
BERYLLIUM																					
CADMIUM																					
CALCIUM																					
CHROMIUM																					
COBALT																					
COPPER																					
IRON																					
LEAD																					
MAGNESIUM																					
MANGANESE							26(A)														
MERCURY				-0.1																	
NICKEL								-1.5	>2xCRDL												
POTASSIUM																					
SELENIUM								57.4													
SILVER																					
SODIUM											304.7										
THALLIUM				-3.1																	
TIN																					
VANADIUM																					
ZINC																					
CYANIDE																					

Hg i (-) — verun sample for no reason (~~dup~~ & spk would have been out)

USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No:	30721
DAS No:	
SDG No:	ME21M0

L

Date Shipped:	7/16/2002
Carrier Name:	FedEx
Airbill:	827673148913
Shipped to:	American Analytical & Technical Services, Inc. 1700 West Albany Suite C Broken Arrow OK 74012 (918) 251-0545

Chain of Custody Record

Sampler Signature: Annie Peters

	Relinquished By	(Date / Time)	Received By	(Date / Time)
1	Annie Peters	7/16/02 1300	B. Tomlin	7/17/02 09:15
2				
3				
4				

For Lab Use Only

Lab Contract No:	68D00086
Unit Price:	$116.93
Transfer To:	
Lab Contract No:	
Unit Price:	

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE	STATION LOCATION	SAMPLE COLLECT DATE/TIME	ORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
ME21L7	Soil/Sediment/ Mechelle Anderson	M/G	TM (7)	598854 (Ice Only) (1)	H/WS-01-04	S: 7/15/2002 14:10	E21L7	OK
ME21L8	Soil/Sediment/ Mechelle Anderson	M/G	TM (7)	598858 (Ice Only) (1)	H/WS-01-05	S: 7/15/2002 14:25	E21L8	
ME21L9	Soil/Sediment/ Mechelle Anderson	M/G	TM (7)	598862 (Ice Only) (1)	H/WS-02-06	S: 7/15/2002 15:32	E21L9	
ME21M0	Soil/Sediment/ Mechelle Anderson	M/G	TM (7)	598866 (Ice Only) (1)	H/WS-02-07	S: 7/15/2002 15:32	E21M0	
ME21M1	Soil/Sediment/ Mechelle Anderson	M/G	TM (7)	598870 (Ice Only) (1)	H/WS-02-08	S: 7/15/2002 15:32	E21M1	

COPY

ORIGINAL DOCUMENTS ARE INCLUDED IN
CSF 30721 SDG ME21K0
Signature D. Crandell
Date 7/22/02

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Shipment for Case Complete?N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt: 6.2°	Chain of Custody Seal Number: 87122/87123
Analysis Key: TM = CLP TAL Total Metals	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? Y	Shipment Iced? Y

TR Number: 5-343595582-071602-0003

LABORATORY COPY

PR provides preliminary results. Requests for preliminary results will increase analytical costs.
Send Copy to: Contract Laboratory Analytical Services Support, 2000 Edmund Halley Dr., Reston, VA. 20191-3436 Phone 703/264-9348 Fax 703/264-9222

AMERICAN ANALYTICAL & TECHNICAL SERVICES, INC
1700 West Albany / Broken Arrow, Oklahoma 74012 / Office (918) 251-2858 / Fax (918) 251-2599

JUL 2 4 2002

SDG NARRATIVE

CONTRACT: 68W00086
CASE: 30721
SDG: ME21M0

DATE: July 23, 2002
SOW NO.: ILM04.1
EPISODE NO.: 50290

INORGANIC METAL FRACTION:

Two soil samples were submitted for ICP, and Hg analysis. No major problems occurred during the digestion or analyses of these samples. The cooler temperature at time of receipt was at 6.2° Celsius. The cooler temperature indicator bottle was present. Sample tags were present. No QC was designated by the sampler. See attached e-mail for correspondence. The sample's analyses were completed according to the following:

SWL SOP #	Method SOP is based
SWL-IN-200	ILM03.0/04.0 (ICP digestion & analysis)
SWL-IN-202	ILM03.0/04.0 (analysis of Hg by cold vapor)

Initial and Continuing Calibration Checks: No problems

Initial and Continuing Calibration Blanks: The following elements showed low level concentrations below the Contract Required Detection Limit in the Calibration Blank: Hg, Tl, Zn.
No action required.

Linearity near the CRDL (CRA & CRI): The CRI standard was outside of our in house warning limits of 70-130%R for the following elements: Hg. No action required.

Preparation Blank: The following elements showed low level concentrations below the Contract Required Detection Limit in the Preparation Blank: Se, Zn.
No action required.

Lab Control Spikes: No problems.

Matrix Spikes: The following elements were outside the control limits of 75-125% recovery: Ni, Se.
All associated samples were flagged with a "N" on Form I's.

Duplicate(s): The following elements were outside the control limits of 0-20% RPD: Fe, Mn, Ni, Zn.
All associated samples were flagged with a "*" on Form I's.

AMERICAN ANALYTICAL & TECHNICAL SERVICES, INC
1700 West Albany / Broken Arrow, Oklahoma 74012 / Office (918) 251-2858 / Fax (918) 251-2599

Serial Dilution (ICP): The soil serial dilution was outside the control limits of 10% for the following elements: none.
No action required.

Sincerely,

Steve Markham
Operations Manager

JUL 2 4 2002

U.S. EPA - CLP

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: AMERICAN_ANALYTICAL_AND_T Contract: 68W00086__

Lab Code: AATS__ Case No.: 30721 SAS No.: _____ SDG No.:ME21M0

SOW No.: ILM04.0 1 7/23/02

EPA Sample No.	Lab Sample ID
ME21M0	50290.01
ME21M1	50290.02
ME21M1D	50290.03D
ME21M1S	50290.04S

Were ICP interelement corrections applied ? Yes/No YES

Were ICP background corrections applied ? Yes/No YES

If yes - were raw data generated before application of background corrections ? Yes/No NO_

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Steve L. Markham Name: Steve L. Markham

Date: 07/23/02 Title: Operations Manager

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

ME21M0

Lab Name: AMERICAN_ANALYTICAL_AND_T Contract: 68W00086__

Lab Code: AATS__ Case No.: 30721_ SAS No.: _____ SDG No.: ME21M0

Matrix (soil/water): SOIL_ Lab Sample ID: 50290.01

Level (low/med): LOW__ Date Received: 07/17/02

% Solids: _78.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4400			P
7440-36-0	Antimony	2.3	U		P
7440-38-2	Arsenic	17.5			P
7440-39-3	Barium	3300			P
7440-41-7	Beryllium	0.36	B		P
7440-43-9	Cadmium	12.4			P
7440-70-2	Calcium	23200			P
7440-47-3	Chromium	99.0			P
7440-48-4	Cobalt	35.9			P
7440-50-8	Copper	267			P
7439-89-6	Iron	81800		*	P
7439-92-1	Lead	648			P
7439-95-4	Magnesium	1570			P
7439-96-5	Manganese	574		*	P
7439-97-6	Mercury	2.6			CV
7440-02-0	Nickel	2990		N*	P
7440-09-7	Potassium	513	B		P
7782-49-2	Selenium	1.2 ~~1.0~~	~~U~~ B	N	P
7440-22-4	Silver	1.7	B		P
7440-23-5	Sodium	590	B		P
7440-28-0	Thallium	4.7			P
7440-62-2	Vanadium	17.9			P
7440-66-6	Zinc	2430		*	P
	Cyanide				NR

g4

Color Before: BROWN____ Clarity Before: _____ Texture: MEDIUM

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: _____

Comments:

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.
ME21M1

Lab Name: AMERICAN_ANALYTICAL_AND_T Contract: 68W00086__

Lab Code: AATS__ Case No.: 30721_ SAS No.: _____ SDG No.: ME21M0

Matrix (soil/water): SOIL_ Lab Sample ID: 50290.02

Level (low/med): LOW__ Date Received: 07/17/02

% Solids: _92.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1810			P
7440-36-0	Antimony	1.9	U		P
7440-38-2	Arsenic	6.2			P
7440-39-3	Barium	126			P
7440-41-7	Beryllium	0.25	B		P
7440-43-9	Cadmium	1.7			P
7440-70-2	Calcium	8950			P
7440-47-3	Chromium	7.3			P
7440-48-4	Cobalt	12.4			P
7440-50-8	Copper	60.2			P
7439-89-6	Iron	4090		*	P
7439-92-1	Lead	72.6			P
7439-95-4	Magnesium	941	B		P
7439-96-5	Manganese	67.6		*	P
7439-97-6	Mercury	0.20			CV
7440-02-0	Nickel	136		N*	P
7440-09-7	Potassium	371	B		P
7782-49-2	Selenium	0.93 ~~0.84~~	~~U~~ B	N	P
7440-22-4	Silver	0.21	B		P
7440-23-5	Sodium	539	B		P
7440-28-0	Thallium	0.63	U		P
7440-62-2	Vanadium	9.5	B		P
7440-66-6	Zinc	704		*	P
	Cyanide				NR

Color Before: BROWN____ Clarity Before: _____ Texture: COARSE

Color After: YELLOW___ Clarity After: CLEAR_ Artifacts: _____

Comments:

U.S. EPA - CLP

3
BLANKS

Lab Name: AMERICAN_ANALYTICAL_AND_T Contract: 68W00086__

Lab Code: AATS__ Case No.: 30721_ SAS No.: _____ SDG No.: ME21M0

Preparation Blank Matrix (soil/water): SOIL_

Preparation Blank Concentration Units (ug/L or mg/kg): MG/KG

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum	54.0	U	54.0	U	54.0	U	54.0	U	10.80	U	P
Antimony	9.0	U	9.0	U	9.0	U	9.0	U	1.80	U	P
Arsenic	4.0	U	4.0	U	4.0	U	4.0	U	0.80	U	P
Barium	10.0	U	10.0	U	10.0	U	10.0	U	2.00	U	P
Beryllium	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U	P
Cadmium	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U	P
Calcium	349.0	U	349.0	U	349.0	U	349.0	U	69.80	U	P
Chromium	2.0	U	2.0	U	2.0	U	2.0	U	0.40	U	P
Cobalt	5.0	U	5.0	U	5.0	U	5.0	U	1.00	U	P
Copper	2.0	U	2.0	U	2.0	U	2.0	U	0.40	U	P
Iron	27.0	U	27.0	U	27.0	U	27.0	U	5.40	U	P
Lead	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U	P
Magnesium	406.0	U	406.0	U	406.0	U	406.0	U	81.20	U	P
Manganese	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U	P
Mercury	0.1	U	0.1	U	0.1	U	0.1	U	0.05	U	CV
Nickel	5.0	U	5.0	U	5.0	U	5.0	U	1.00	U	P
Potassium	282.0	U	282.0	U	282.0	U	282.0	U	56.40	U	P
Selenium	3.0	U	3.0	U	3.0	U	3.0	U	0.60	U	P
Silver	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U	P
Sodium	470.0	U	470.0	U	470.0	U	470.0	U	94.00	U	P
Thallium	-3.1	B	3.0	U	3.0	U	3.0	U	0.60	U	P
Vanadium	1.0	U	1.0	U	1.0	U	1.0	U	0.20	U	P
Zinc	4.0	U	7.2	B	7.1	B	7.1	B	1.55	B	P
Cyanide											NR

U.S. EPA - CLP

3
BLANKS

Lab Name: AMERICAN_ANALYTICAL_AND_T Contract: 68W00086__

Lab Code: AATS__ Case No.: 30721_ SAS No.: _____ SDG No.: ME21M0

Preparation Blank Matrix (soil/water): _____

Preparation Blank Concentration Units (ug/L or mg/kg): _____

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											NR
Antimony											NR
Arsenic											NR
Barium											NR
Beryllium											NR
Cadmium											NR
Calcium											NR
Chromium											NR
Cobalt											NR
Copper											NR
Iron	7.0	U	7.0	U	7.0	U	7.0	U			P
Lead											NR
Magnesium											NR
Manganese											NR
Mercury			-0.1	B	0.1	U	0.1	U			CV
Nickel	1.0	U	1.0	U	1.0	U	1.0	U			P
Potassium											NR
Selenium											NR
Silver											NR
Sodium											NR
Thallium											NR
Vanadium											NR
Zinc											NR
Cyanide											NR

U.S. EPA - CLP

5A
SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

ME21M1S

Lab Name: AMERICAN_ANALYTICAL_AND_T Contract: 68W00086__

Lab Code: AATS__ Case No.: 30721_ SAS No.: _____ SDG No.: ME21M0

Matrix (soil/water): SOIL__ Level (low/med): LOW___

% Solids for Sample: _92.2

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									NR
Antimony	75-125	93.6461		1.8954	U	105.30	88.9		P
Arsenic	75-125	15.0012		6.1567		8.42	105.0		P
Barium	75-125	535.4645		125.8853		421.20	97.2		P
Beryllium	75-125	10.7754		0.2464	B	10.53	100.0		P
Cadmium	75-125	11.8426		1.7238		10.53	96.1		P
Calcium									NR
Chromium	75-125	49.1111		7.2660		42.12	99.3		P
Cobalt	75-125	113.3578		12.4259		105.30	95.9		P
Copper	75-125	119.5268		60.2093		52.65	112.7		P
Iron									NR
Lead		80.9195		72.6180		4.21	197.2		P
Magnesium									NR
Manganese	75-125	156.3313		67.6339		105.30	84.2		P
Mercury	75-125	0.6941		0.1985		0.54	91.8		CV
Nickel	75-125	134.1345		135.7269		105.30	-1.5	N	P
Potassium									NR
Selenium	75-125	2.1435		0.9328	B	2.11	57.4	N	P
Silver	75-125	10.8812		0.2142	B	10.53	101.3		P
Sodium									NR
Thallium	75-125	10.2660		0.6318	U	10.53	97.5		P
Vanadium	75-125	113.4751		9.5295	B	105.30	98.7		P
Zinc		676.2848		704.4357		105.30	-26.7		P
Cyanide									NR

Comments:

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5B

POST DIGEST SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

ME21M1A

Lab Name: AMERICAN_ANALYTICAL_AND_T Contract: 68W00086__

Lab Code: AATS__ Case No.: 30721_ SAS No.: _____ SDG No.: ME21M0

Matrix (soil/water) : SOIL__ Level (low/med): LOW___

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
Aluminum									NR
Antimony									NR
Arsenic									NR
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper									NR
Iron									NR
Lead									NR
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel		2010.95		644.47		1300.0	105.1		P
Potassium									NR
Selenium		13.26		4.43	B	10.0	88.3		P
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Cyanide									NR

Comments:

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DUPLICATES

EPA SAMPLE NO.

ME21M1D

Lab Name: AMERICAN_ANALYTICAL_AND_T Contract: 68W00086__

Lab Code: AATS__ Case No.: 30721_ SAS No.: _____ SDG No.: ME21M0

Matrix (soil/water): SOIL_ Level (low/med): _LOW__

% Solids for Sample: _92.2 % Solids for Duplicate: __91.1

Concentration Units (ug/L or mg/kg dry weight): MG/KG

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		1813.8892		1499.0746		19.0		P
Antimony		1.8954	U	1.8954	U			P
Arsenic	2.1060	6.1567		6.0335		2.0		P
Barium	42.1203	125.8853		105.0683		18.0		P
Beryllium		0.2464	B	0.2409	B	2.3		P
Cadmium	1.0530	1.7238		1.1598		39.1		P
Calcium		8950.9511		7389.5411		19.1		P
Chromium	2.1060	7.2660		7.0238		3.4		P
Cobalt	10.5301	12.4259		11.2072		10.3		P
Copper		60.2093		64.9399		7.6		P
Iron		4093.1788		5566.1732		30.5	*	P
Lead		72.6180		73.1514		0.7		P
Magnesium		941.4519	B	735.9388	B	24.5		P
Manganese		67.6339		49.1437		31.7	*	P
Mercury	0.1085	0.1985		0.2017		1.6		CV
Nickel	8.4241	135.7269		29.7639		128.1	*	P
Potassium		370.9947	B	354.4768	B	4.6		P
Selenium		0.9328	B	0.6318	U	200.0		P
Silver		0.2142	B	0.2106	U	200.0		P
Sodium		539.0390	B	563.1529	B	4.4		P
Thallium		0.6318	U	0.6318	U			P
Vanadium		9.5295	B	8.3735	B	12.9		P
Zinc		704.4357		501.0760		33.7	*	P
Cyanide								NR

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LABORATORY CONTROL SAMPLE

Lab Name: AMERICAN_ANALYTICAL_AND_T Contract: 68W00086__

Lab Code: AATS__ Case No.: 30721_ SAS No.: _____ SDG No.: ME21M0

Solid LCS Source: EPA0996_____

Aqueous LCS Source: _____

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum				309.0	272.8		193.1	424.2	88.3
Antimony				213.0	238.9		129.4	297.2	112.2
Arsenic				930.0	983.3		613.6	1247.0	105.7
Barium				5.3	5.4	B	2.5	8.1	101.9
Beryllium				18.8	18.5		15.3	22.2	98.4
Cadmium				41.6	46.5		32.1	51.1	111.8
Calcium				184000.5	174117.1		142933.0	225376.0	94.6
Chromium				96.5	95.4		77.8	115.2	98.9
Cobalt				140.0	141.4		115.4	165.0	101.0
Copper				6680.0	6388.2		5727.3	7633.1	95.6
Iron				21000.0	20546.4		16831.3	25193.0	97.8
Lead				224.0	210.0		167.6	280.5	93.7
Magnesium				113000.0	114597.8		97493.0	128886.0	101.4
Manganese				201.0	200.5		167.9	234.4	99.8
Mercury				12.3	10.1		7.8	16.9	82.1
Nickel				56.8	58.5		43.5	70.1	103.0
Potassium				102.4	56.4	U	0.0	379.3	0.0
Selenium				37.0	40.5		17.6	56.4	109.5
Silver				20.9	21.0		13.2	28.5	100.5
Sodium				92.8	304.7	B	0.0	277.4	328.3
Thallium				38.1	35.6		21.6	51.6	93.4
Vanadium				65.8	63.6		53.0	78.6	96.7
Zinc				175.0	175.7		127.7	222.1	100.4
Cyanide									

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Instrument Detection Limits (Quarterly)

Lab Name: AMERICAN_ANALYTICAL_AND_T Contract: 68W00086__

Lab Code: AATS__ Case No.: 30721_ SAS No.: _____ SDG No.: ME21M0

ICP ID Number: TJA_ET2_____ Date: 06/07/02

Flame AA ID Number : _____

Furnace AA ID Number : _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			60		NR
Arsenic			10		NR
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron	271.44		100	7.0	P
Lead	220.35		3	1.0	P
Magnesium			5000		NR
Manganese			15		NR
Mercury			0.2		NR
Nickel	231.60		40	1.0	P
Potassium			5000		NR
Selenium	196.03		5	3.0	P
Silver			10		NR
Sodium			5000		NR
Thallium	190.87		10	3.0	P
Vanadium			50		NR
Zinc			20		NR
Cyanide			10		NR

Comments:

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Instrument Detection Limits (Quarterly)

Lab Name: AMERICAN_ANALYTICAL_AND_T Contract: 68W00086__

Lab Code: AATS__ Case No.: 30721_ SAS No.: _____ SDG No.: ME21M0

ICP ID Number: TJA_ET3_____ Date: 05/24/02

Flame AA ID Number : _____

Furnace AA ID Number : _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum	308.16		200	54.0	P
Antimony	206.84		60	9.0	P
Arsenic	189.04		10	4.0	P
Barium	493.41		200	10.0	P
Beryllium	313.04		5	1.0	P
Cadmium	226.50		5	1.0	P
Calcium	317.93		5000	349.0	P
Chromium	267.75		10	2.0	P
Cobalt	228.61		50	5.0	P
Copper	324.75		25	2.0	P
Iron	271.44		100	27.0	P
Lead			3		NR
Magnesium	279.81		5000	406.0	P
Manganese	257.61		15	1.0	P
Mercury			0.2		NR
Nickel	231.60		40	5.0	P
Potassium	766.49		5000	282.0	P
Selenium	196.03		5	4.0	P
Silver	328.07		10	1.0	P
Sodium	588.99		5000	470.0	P
Thallium			10		NR
Vanadium	292.40		50	1.0	P
Zinc	213.86		20	4.0	P
Cyanide			10		NR

Comments:

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Instrument Detection Limits (Quarterly)

Lab Name: AMERICAN_ANALYTICAL_AND_T Contract: 68W00086__

Lab Code: AATS__ Case No.: 30721_ SAS No.: _____ SDG No.: ME21M0

ICP ID Number: _____ Date: 05/07/02

Flame AA ID Number : LEEMAN_B____

Furnace AA ID Number : _____

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			60		NR
Arsenic			10		NR
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead			3		NR
Magnesium			5000		NR
Manganese			15		NR
Mercury	253.70		0.2	0.1	CV
Nickel			40		NR
Potassium			5000		NR
Selenium			5		NR
Silver			10		NR
Sodium			5000		NR
Thallium			10		NR
Vanadium			50		NR
Zinc			20		NR
Cyanide			10		NR

Comments:

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PREPARATION LOG

Lab Name: AMERICAN_ANALYTICAL_AND_T Contract: 68W00086__

Lab Code: AATS__ Case No.:_30721_ SAS No.: _____ SDG No.:ME21M0

Method: P_

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
LCSS	07/18/02	1.00	200
ME21M0	07/18/02	1.02	200
ME21M1	07/18/02	1.03	200
ME21M1D	07/18/02	1.03	200
ME21M1S	07/18/02	1.03	200
PBS	07/18/02	1.00	200

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PREPARATION LOG

Lab Name: AMERICAN_ANALYTICAL_AND_T Contract: 68W00086__

Lab Code: AATS__ Case No.:_30721_ SAS No.: _____ SDG No.:ME21M0

Method: CV

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
LCSS	07/18/02	0.20	100
ME21M0	07/18/02	0.23	100
ME21M1	07/18/02	0.20	100
ME21M1D	07/18/02	0.20	100
ME21M1S	07/18/02	0.20	100
PBS	07/18/02	0.20	100

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V
ESD Central Regional Laboratory
Data Tracking Form for Contract Samples

Sample Delivery Group: ME21M0 CERCLIS No: TBD

Case No: 30721 Site Name/Location: Sauget Site H+I

Contractor or EPA Lab: AATS Data User: TETRA TECH

No. of Samples: 2 Date Sampled or Date Received: 7-24-02

Have Chain-of-Custody records been received? Yes ✓ No ____
Have traffic reports or packing lists been received? Yes ✓ No ____
If no, are traffic report or packing list numbers written on the Chain-of-Custody Record?
Yes ____ No ____
If no, which traffic report or packing list numbers are missing?

____ ____ ____ ____
____ ____ ____ ____

Are basic data forms in? Yes ✓ No ____
No of samples claimed: 2 No. of samples received: 2

Received by: Eva M. Dixon/ESAT Date: 7-24-02

Received by LSSS: Eva M. Dixon/ESAT Date: 7-24-02

Review started: 8-9-02 Reviewer Signature: J Gary

Total time spent on review: 4 +1 mm Date review completed: 8-13-02

Copied by: ____ Date: ____

Mailed to user by: ____ Date: ____

DATA USER:
Please fill in the blanks below and return this form to:
Sylvia Griffin, Data Mgmt. Coordinator, Region V, ML-10C

Data received by: ____ Date: ____

Data review received by: ____ Date: ____

Inorganic Data Complete	[ ] Suitable for Intended Purpose [ ] ✓ if OK
Organic Data Complete	[ ] Suitable for Intended Purpose [ ] ✓ if OK
Dioxin data Complete	[ ] Suitable for Intended Purpose [ ] ✓ if OK
SAS Data Complete	[ ] Suitable for Intended Purpose [ ] ✓ if OK

PROBLEMS: Please indicate reasons why data are not suitable for your uses.

____
____

Received by Data Mgmt. Coordinator for Files. Date: ____